



ISTEP+

GQE Item Sampler





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Dear Colleague:

In the *GQE Item Sampler*, you will find information designed to guide, direct, and clarify your efforts in preparing for and administering Indiana's Graduation Qualifying Exam (GQE). We want your students to be as well-prepared as possible to meet the GQE requirement; for the vast majority of students that means passing the GQE.

As high school teachers, your guidance and knowledge of the Indiana Academic Standards assessed on the GQE, and your familiarity with all aspects of test administration, are critically important to students' success on the test and with the rest of their coursework. You influence their choices and futures including their academic achievement.

We expect that the information provided in this sampler will arm you with the necessary material to help educate and motivate your students. Additional information about Indiana Statewide Testing for Educational Progress-Plus (*ISTEP+*) is available online at www.doe.state.in.us/istep.

Thank you for all you do to prepare students to meet the challenges they will face in this ever-changing and challenging world.

Sincerely,

A handwritten signature in cursive script that reads "Dr. Suellen Reed".

Dr. Suellen Reed
Superintendent of Public Instruction

Introduction

The *GQE Item Sampler* will provide information about the *ISTEP+* Graduation Qualifying Examination (GQE) for students, parents, educators, and others affected by the examination. The information in this sampler has been compiled by the Division of School Assessment of the Indiana Department of Education and CTB/McGraw-Hill, the test development contractor for Indiana.

Sample test items (questions) and scoring rubrics for both English/Language Arts and Mathematics are contained within this book. The passages presented and the accompanying items for English/Language Arts are samples only and are **not** actual passages or items. The scoring rubrics presented for Language-in-Use and Writing Development are the actual rubrics used to score the GQE in English/Language Arts. The multiple-choice items presented for Mathematics are samples only, while the open-ended items and scoring rubrics are released items from previous test administrations. All samples are representative of the types of items that students taking the GQE will be required to answer.

A condensed version of the Essential Skills is included in this sampler. These are the skills that all Indiana students are required to know and be able to perform in order to obtain a high school diploma. Complete copies of the Essential Skills can be obtained from the Indiana Department of Education or from the Web site at www.doe.state.in.us/.

Frequently Asked Questions

Q. What is the GQE requirement?

- A. Indiana students must demonstrate Grade 9 skills in English/Language Arts and Mathematics, in addition to completing all other state and local graduation requirements, in order to be eligible to receive a high school diploma.

A student may meet this requirement in one of three ways:

1. by passing the Grade 10 *ISTEP+* GQE; or
2. by completing all directed and elective Core 40 courses with a C or better; or
3. by attaining a 95 percent high school attendance rate and a C average in the 22 credit hours that are required of all Indiana high school graduates; taking the test at least once every year, participating in remediation opportunities, demonstrating Grade 9 skills in English/Language Arts and Mathematics through other assessments or classroom work, and meeting other criteria required by IC 20-10.1-16-13.

Q. How can a student prepare for the test?

- A. Students can prepare for the GQE, or any test, by keeping current with their school work. Parents should attend parent-teacher conferences and be aware of how well their child is doing in each course. Teachers, too, are instrumental in preparing students to succeed on the GQE. This sampler was designed to assist teachers by providing a model for how the Indiana Academic Standards will be assessed on the GQE.

Q. Who is a Grade 10 student?

- A. A definition has been adopted by the Indiana State Board of Education to help schools determine which students are eligible to take the GQE. The complete Grade 10 Definition (511 IAC 5-3-4) can be found at www.doe.state.in.us/istep under "Important *ISTEP+* Documents."

Q. How many times may students take the GQE?

- A. A student may take the GQE until the student passes or graduates through one of the two other available alternatives. The GQE is available to students at least five times during the course of a typical high school experience—once in Grade 10, twice in Grade 11, and twice in Grade 12.

Q. *On a retest, what part of the examination will a student take?*

- A. Retests will include only the content area(s) that the student has not passed.

Q. *What if my child is enrolled in special education?*

- A. All students are required to demonstrate that they have met the achievement standards measured by the GQE in order to graduate. If your child received instructional accommodations in classroom testing situations, he or she can expect to receive similar accommodations during testing.

If a student's case conference committee determines that the GQE is not an appropriate test for a student, then the student should participate in the alternate assessment (Indiana Assessment of Educational Proficiencies). Participating in the alternate assessment does not meet the GQE requirement.

Q. *How are accommodations determined, and who makes the determination?*

- A. Accommodations for testing conditions are determined by the case conference committee for a special education student, and by the individual service plan for a student with disabilities who receives accommodations under Section 504 of the Rehabilitation Act of 1973. Accommodations that are used for classroom assessments in a particular content area are generally appropriate for use during the *ISTEP+* assessment of the same content area.

Q. *Does the GQE requirement apply to a student whose primary language is a language other than English?*

- A. Every student who intends to receive an Indiana high school diploma must take the GQE and meet the GQE standards in one of the three ways available. (See the first question on page 7.)

Q. *May a student whose primary language is a language other than English receive accommodations on the GQE?*

- A. Extended time is available for Limited English Proficient (LEP) students. If students also have an Individualized Education Program or Section 504 plan, then they may be eligible for other accommodations. Decisions on whether LEP students will receive extra time must be made and documented on an individual basis.

Q. *When is the GQE administered?*

- A. The GQE is administered over a three-day period in September. The test must be given in the order prescribed by the Department of Education. GQE retests are administered in March, and are available to juniors, seniors, and adults. No makeup days are offered for the administration of the GQE.

Q. *When are test results returned to schools?*

- A. All *ISTEP+* and GQE student, classroom, building, and corporation reports are returned to the corporation test contact person as soon as possible. Historically, test results have arrived the first week of January following testing. After the Fall 2000 administration, reports began arriving at local school corporations on December 14, and it is expected that the delivery date will be further improved upon next fall. Spring GQE retest results are returned to schools the first week of May.

Q. *How and where are GQE tests graded?*

- A. Multiple-choice (basic skills) items are scored by machine in Monterey, California. Constructed-response (applied skills) items are graded by specially trained scorers who must hold at least a bachelor's degree; however, many also hold advanced degrees and teaching licenses. The scoring of constructed-response items takes place in Indiana following strict scoring rules. Scores are based on correct answers as well as on content, level of understanding of items, and ability to communicate answers. Every answer to a constructed-response item on the GQE is read and scored independently by at least two scorers.

Q. *What if I have additional questions about the GQE?*

- A. Your school officials will be able to answer most of your questions regarding students enrolled in special programs and other questions you may have about Indiana's GQE.

If you have additional questions, you may telephone the toll-free hotline for the Indiana Department of Education at 1-888-54ISTEP (1-888-544-7837) or go to our web site at www.doe.state.in.us/istep/welcome.html.

Q. *What is appropriate test preparation?*

- A. This sampler provides sample items so that teachers are able to see some of the ways in which the Indiana Academic Standards are assessed. On the following page is a table that identifies appropriate and inappropriate test-preparation strategies.

TEST PREPARATION FOR *ISTEP+*

Is this an ethical practice?	YES	NO
developing instructional objectives based on the Indiana Academic Standards	X	
making changes in instruction that enhance student skills, learning, and achievement	X	
training students in appropriate test taking strategies	X	
motivating students to perform well on the assessment by talking to students, their parents, and other teachers	X	
using released <i>ISTEP+</i> items (Applied Skills Book I items only) for professional development purposes, instructional purposes, and as examples in the classroom	X	
providing to all concerned adequate notice of upcoming assessments	X	
developing curricula or instructional objectives based upon specific <i>ISTEP+</i> items (multiple-choice questions)		X
preparing student guides or classroom assessments that are based solely on specific items from <i>ISTEP+</i> , such that they may be considered a comparable or alternative form of the state assessment (except the released Applied Skills Book I)		X
copying English/Language Arts or Mathematics items from the assessment and using them for, or incorporating them into, language arts or mathematics instruction (except the released Applied Skills Book I)		X
presenting items from any part of the test before test administration		X
making a copy of any portion of <i>ISTEP+</i> (except the released Applied Skills Book I) for use in instructional planning, classroom instruction, or assessment		X
sharing the actual <i>ISTEP+</i> test (except the released Applied Skills Book I) with parents, teachers, or others in a public forum, which is a violation of test security and could result in the invalidation of students' test results		X
buying, developing, or promoting the use of any extensive test practice/preparation materials that serve as a parallel form of <i>ISTEP+</i> or that may contain specific <i>ISTEP+</i> items or tasks (except for the released Applied Skills Book I)		X



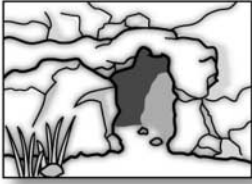
English/Language Arts

ESSENTIAL SKILLS

- ☐ Use meaning (semantic), structural (syntactic), and sound (phonetic) clues to construct meaning
- ☐ Make comparisons and predictions
- ☐ Use headings, pictures, captions, and other textual clues
- ☐ Read from and understand different points of view (included as part of Purpose/Perspective)*
- ☐ Make and defend judgments about the quality and content of material (included as part of Genres/Conventions)*
- ☐ Use the writing process—pre-writing, drafting, peer-sharing, revising, and editing
- ☐ Language-in-Use
- ☐ Edit and proofread for punctuation and capitalization
- ☐ Edit and proofread for usage
- ☐ Edit and proofread for spelling
- ☐ Revise written text for clarity, coherence, economy, and voice
- ☐ Make inferences
- ☐ Identify cause and effect
- ☐ Identify author's/writer's purpose and perspective; main idea; theme
- ☐ Compare and contrast presented material
- ☐ Understand how language is used to influence and persuade
- ☐ Distinguish between fact and opinion
- ☐ Determine the literal meaning of written text
- ☐ Produce variety of forms: informational essays, reflective pieces, business letters; synthesize information; complete simple forms, simple directions*
- ☐ Identify common literary genres and conventions; understand elements of story structure—characters, setting, plot

***NOTE:** Essential Skills marked with an asterisk are assessed in the classroom and not as part of the *ISTEP+* tests.

Passages



Memories

Putting aside thoughts of his last day of vacation in New Mexico, Steve looked once more at the menu and ordered the farmer's breakfast: three eggs, ham, hash browns, and toast. He was glad to have seen White Sands again, but now he was anxious to return to Denver.

"Hello, Steve! Remember me?" A tall young woman in blue jeans sat down on the stool next to him.

"Jill!" He smiled, noticing the sparkling eyes of an old friend. "Are your folks still here? I thought they had moved to Los Angeles."

"They stayed here," she said, "and New Mexico Julys are still the same."

"I met a number of the kids from high school at the parade on Sunday," Steve added. "Everyone has changed so much in the last eight years." Still reflecting on the past, he said, "The last time I saw you was on our geology field trip to Carlsbad Caverns. What a fantastic trip! I've been back many times since then."

Jill smiled. "So have I."

"Know what I remember the most?" remarked Steve. "Those beautiful stalactites, calcium icicles hanging from the ceiling; they looked like pearl and alabaster-colored needles that were smooth and hard as ice."

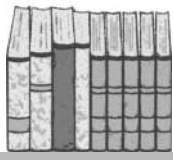
"Do you remember how frightened I was of the bats?" Jill laughed.

"That's okay. Everyone was awed by the bats, even the ranger." Steve recalled how their class had stood waiting outside the caves. The air had cooled rapidly, and the last ember-glow of the sun had turned the sky above the caverns a brilliant orange-red. Then a slow, black cloud had issued from the caverns and ascended into the heavens. They both shuddered at the memory of that huge "cloud" of bats.

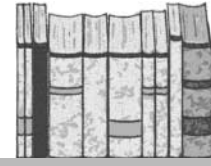
"What are you doing now, Steve?" asked Jill.

"That trip had quite an effect on me," replied Steve. "I'm a high school geology teacher in Denver. What about you?"

"Those caves had their effect on me, too," Jill replied. "I'm now a ranger for the National Parks, and Carlsbad Caverns is my home base!"



Our Library



Our public library must be expanded. Our city librarian, Henry Garfield, says, “We are not considering hiring more employees. Our study shows we have adequate personnel. Our immediate need is for additional space.”

Patrons often look up a reference in the card catalog or on the computer only to find it stamped “Stored in Basement of Old City Hall.” The patron must then take the time to fill out a request slip and must wait several days for the book to arrive. The reference department is so crowded that frequently-used volumes are piled on the floor. Expensive books are sometimes damaged as they wait to be placed on shelves.

Volunteers have made oral-history tape recordings of the personal recollections of many of our older citizens, but we need space to store and use the recordings. Also, with more room the periodical section could be expanded. Current magazines would help many of you Main Street merchants predict future business trends.

Bringing more patrons to the library will bring more foot traffic to Main Street, and increased sales will surely compensate for the small increase in taxes required to pay for this bond issue. Merchants might even consider this tax as part of their advertising budgets.

The question is not “Can we afford to expand our library?” It is “Can we afford *not* to?”

Letter to the Editor

Dear Editor,

I'm very disappointed with the school board's recent proposal to eliminate the junior varsity basketball team. Although the team has not had a winning season for the last three years, the board would be wrong to decide that the team and their coach do not deserve continued support. I realize that some players may never develop well enough to make the varsity team, but they should not be denied the opportunity for interscholastic competition just because they are not the best players. Also, playing on the junior varsity is excellent training for the varsity, since both teams use many of the same plays.

There is enough money in the

present budget to finance the junior varsity team. Basketball for students is more important than luxuries for the staff like sending school board members to expensive conferences, paying for the superintendent's car, and giving teachers time off to attend committee meetings.

The basketball schedule for the next season has been adopted. All the other high schools in the league will be inconvenienced if the junior varsity team is eliminated. Most importantly, the junior varsity players will be hurt. When the school board votes next week, I hope they will reconsider their proposal to eliminate the junior varsity team.

Concerned Parent

Light

X-rays, ultraviolet rays, infrared rays, and radio waves are all forms of radiant energy. The human eye can perceive only a small portion of this spectrum of radiant energy; that segment is called visible light or simply, light.

Light is one of the most important aspects of everyday life. As with the water we drink and the air we breathe, we often take this marvelous phenomenon for granted. Light allows us to see; it gives us fuel and food; it makes life on Earth possible.

From the early 1600s, scientists have debated the nature of light and its movement through space. After using a prism to separate white light into a spectrum of colors (as water drops separate sunlight), Sir Isaac Newton proposed that light is composed of tiny particles that travel in straight lines through space. This theory became known as the corpuscular theory. Around the same time, a Dutchman, Huygens, formulated a theory that light travels in waves, rather than straight lines.

For a hundred years, scientists argued over which theory was correct. Then in 1801, Thomas Young, a British physicist, demonstrated that two light beams, when overlapped, will reinforce each other. Since water waves also behave this way, most scientists accepted Young's experiment as proof of the wavelike nature of light. Finally about 1900, Max Planck, a German scientist, led the way to our present understanding of light. Planck's work showed that light has *both* particle and wave aspects.

As with gravity, the closest we have come to explaining light is to describe its effects and properties. However, experiments continue; and, though our understanding is still incomplete, photography, lasers, solar cells, and other inventions mark our progress in understanding and learning to use light.

Sample Test Items

Construct Meaning

Using clues from the surrounding text, students determine the meaning of a word or sentence. Assessment of this skill is by both multiple-choice and open-ended items.

For Numbers 1 and 2, choose the word that best fills the blank.

1 The student spoke two languages fluently. This _____ ability allowed her to communicate with people in both Greece and the United States.

- A plural
- B cultural
- ✓ C bilingual
- D international

2 Some diseases can be _____ for years and then suddenly break out as epidemics.

- ✓ A dormant
- B dominant
- C domestic
- D diplomatic

Number 3 is based on "Memories," found on page 12.

3 Read this sentence from the story.

Everyone was awed by the bats, even the ranger.

What does *awed* mean in this context?

Exemplars:

- astonished
- amazed
- any correct definition that would be appropriate in this context

Rubric:

- | | |
|-----------------|-------------------------|
| 1 point | version of one exemplar |
| 0 points | other |

Make Predictions

Students demonstrate their understanding of both the purpose and the meaning of a passage by predicting a logical outcome. Assessment of this skill is by both multiple-choice and open-ended items.

Number 4 is based on "Letter to the Editor," found on page 14.

4 What will MOST LIKELY happen when the school board meets?

- A** The varsity team will be eliminated.
- B** More money will be set aside for conferences.
- C** The junior varsity team will receive new uniforms.
- ✓ **D** A sports issue will be voted on.

Number 5 is based on "Our Library," found on page 13.

5 If the writer succeeds in her purpose, what will MOST LIKELY happen?

- A** More library employees will be hired.
- ✓ **B** The library premises will be enlarged.
- C** The library will be closed for inventory.
- D** Expensive books will be purchased for the library.

Number 6 is based on "Our Library," found on page 13.

6 What will MOST LIKELY happen if the small library is NOT made larger?

Exemplars:

- More and more expensive books will be damaged.
- There will not be any space for oral history recordings.
- There will not be a tax increase.
- The smaller library will not bring an increase in foot traffic on Main Street.
- Patrons will continue to wait several days for requested books.
- any other relevant text-based prediction

Rubric:

- 1 point** version of one exemplar
- 0 points** other

Textual Clues

Students use titles, headlines, captions, charts, footnotes, illustrations, and other features to understand text. Assessment is primarily by multiple-choice items, although some open-ended items may be used.

Use the following table to do Numbers 7 and 8.

FIVE COSTLY NATURAL DISASTERS IN UNITED STATES HISTORY
(in billions of dollars)

Event	Year	Cost
20-State Winter Storm	1993	\$1.8
Hurricane Andrew	1992	\$20.0
Hurricane Betsy	1965	\$6.0
Hurricane Hugo	1989	\$7.0
Northridge, CA, Earthquake	1994	\$12.0

7 Which natural disaster caused the MOST damage?

- ✓ **A** Hurricane Andrew
- B** Hurricane Hugo
- C** 20-State Winter Storm
- D** Hurricane Betsy

8 What information can you learn from this chart?

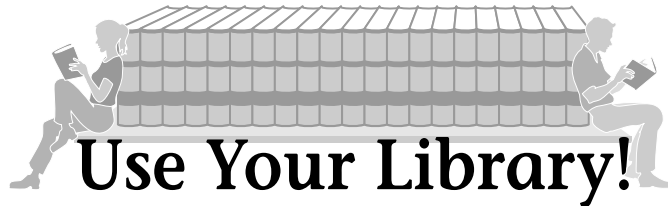
- A** The 20-State Winter Storm caused more damage than Hurricane Betsy.
- B** Hurricane Betsy is the most recent hurricane on the chart.
- ✓ **C** The Northridge, CA, Earthquake caused more damage than did Hurricane Hugo.
- D** Hurricane Hugo is the costliest hurricane on the chart.

Use the Writing Process/Language-in-Use

Given a prompt, students must organize their ideas and fulfill the writing assignment. Student essays are assessed according to the six-point rubric on pages 22 and 23.

In addition, students' ability to use Standard English in their writing is assessed using the four-point rubric on page 21.

9



Read the writing prompt below and complete the writing activity.

The library in your community is sponsoring an essay contest. The winning essay will be featured in the local newspaper, and the winner will receive a cash award. All essays must persuade members of the community to make better use of the library.

Write an essay to persuade people in your community to use the library more often. Your essay may focus on books, or it may point out the variety of services the library offers, such as a bookmobile, computer training, and public meeting rooms for community organizations. Give strong, specific details to support your position.

Be sure to include

- what services or benefits the library offers
- why people in the community should use their library more often
- specific, persuasive details
- a beginning, a middle, and an end to your essay

Language-in-Use Rubric

Grades 6–12

Score	Writing exhibits a good command of language skills.
4	<ul style="list-style-type: none"> • Words have few or no capitalization errors. • Sentences have few or no punctuation errors. • Words have few or no spelling errors. • Sentences have few or no grammar or word usage errors. • Writing has few or no paragraphing errors. • Writing has few or no run-on sentences or sentence fragments. <p>In a Score Point 4 paper, there are no errors that impair the flow of communication. Errors that appear will generally be of the first-draft variety; they have a minor impact on the overall communication.</p>
Score	Writing exhibits an adequate command of language skills.
3	<ul style="list-style-type: none"> • Most capitalization is correct. • Most punctuation is correct. • Most spelling is correct. • Most grammar and word usage are correct. • Most paragraphing is correct. • Writing may have run-on sentences or sentence fragments. <p>In a Score Point 3 paper, errors are occasional but do not impede the flow of communication; the writer's meaning is not seriously obscured by language-in-use errors.</p>
Score	Writing exhibits a minimal command of language skills.
2	<ul style="list-style-type: none"> • Some capitalization is correct. • Some punctuation is correct. • Some spelling is correct. • Some grammar and word usage are correct. • Paragraphing may have errors or may be missing. • Writing may have run-on sentences or sentence fragments. <p>In a Score Point 2 paper, errors are typically frequent and cause the reader to stop and reread part of the writing. While some aspects of the writing may be more consistently correct than others, the existing errors do impair communication. With a little extra effort on the reader's part, it is still possible to discern most, if not all, of what the writer is trying to communicate.</p>
Score	Writing exhibits a less than adequate command of language skills.
1	<ul style="list-style-type: none"> • Words have many capitalization errors. • Sentences have many punctuation errors. • Words have many spelling errors. • Sentences have many grammar and word usage errors. • Paragraphing may have errors or may be missing. • Writing may have run-on sentences or sentence fragments. <p>In a Score Point 1 paper, errors are serious and numerous; they cause the reader to struggle to discern the writer's meaning. Errors are frequently of a wide variety. There may be sections where it is impossible to ascertain what the writer is attempting to communicate.</p>

Writing Development Rubric

Grades 6–12

Overview of the Writing Development Rubric

This rubric summarizes the scoring requirements for each of the six performance levels. To determine the criteria for a specific score point, read the information on both pages of this chart.

Score Level	Ideas and Content	Organization
	Writer:	Writer:
6	<ul style="list-style-type: none">• stays completely focused on topic and task• includes thorough and complete ideas and information	<ul style="list-style-type: none">• organizes ideas logically
5	<ul style="list-style-type: none">• stays focused on topic and task• includes many relevant ideas and information	<ul style="list-style-type: none">• organizes ideas logically
4	<ul style="list-style-type: none">• stays mostly focused on topic and task• includes many relevant ideas and information	<ul style="list-style-type: none">• organizes ideas logically
3	<ul style="list-style-type: none">• stays somewhat focused on topic and task• includes minimally relevant ideas and information	<ul style="list-style-type: none">• attempts to organize ideas logically
2	<ul style="list-style-type: none">• exhibits less than minimal focus on topic and task• includes few relevant ideas or little information	<ul style="list-style-type: none">• does not organize ideas logically
1	<ul style="list-style-type: none">• has little or no focus on topic and task• includes very few relevant ideas or information	<ul style="list-style-type: none">• does not organize ideas logically

NOTE: Chart continues on page 23.

Style	Voice
Writer:	Writer:
<ul style="list-style-type: none"> • exhibits exceptional word usage • demonstrates exceptional writing technique 	<ul style="list-style-type: none"> • effectively adjusts language and tone to task and reader
<ul style="list-style-type: none"> • exhibits more than adequate word usage • demonstrates more than adequate writing technique 	<ul style="list-style-type: none"> • effectively adjusts language and tone to task and reader
<ul style="list-style-type: none"> • exhibits adequate word usage • demonstrates adequate writing technique 	<ul style="list-style-type: none"> • attempts to adjust language and tone to task and reader
<ul style="list-style-type: none"> • exhibits minimal word usage • demonstrates minimal writing technique 	<ul style="list-style-type: none"> • attempts to adjust language and tone to task and reader
<ul style="list-style-type: none"> • exhibits less than minimal word usage • demonstrates less than minimal writing technique 	<ul style="list-style-type: none"> • may use language and tone inappropriate to task and reader
<ul style="list-style-type: none"> • exhibits less than minimal word usage • demonstrates less than minimal writing technique 	<ul style="list-style-type: none"> • may use language and tone inappropriate to task and reader

Punctuation and Capitalization

Students are assessed on their ability to correctly apply the mechanics of Standard English. Assessment is by multiple-choice items as well as through the application of the Language-in-Use Rubric to extended responses and writing prompts.

For Number 10, decide which part of the sentence, if any, has a word that needs a capital letter.

- 10** I failed my English exam | when I answered | that *Great Expectations* was about |
A B C
the French revolution. | None
✓ D E

For Number 11, decide which punctuation mark, if any, is needed in the sentence.

- 11** I ate too much at the class picnic; consequently I was not surprised when I felt ill afterward.
A ;
B :
C .
✓ D ,

Usage

Students are assessed on their ability to correctly use verbs, modifiers, and other elements of written English. Assessment is by multiple-choice items as well as through application of the Language-in-Use Rubric to extended responses and writing prompts.

For Numbers 12 and 13, choose the sentence that is complete and written correctly.

- 12** **A** Two of the places that I most want to see is Niagara Falls and the Grand Canyon.
- ✓ **B** I would have bought three tickets to the game if I had known Joe wanted to go.
- C** We was so happy because we did not go to school when it snowed.
- D** The pilot don't appreciate having to fly all night.
-
- 13** **A** Yesterday, we found out why no one never came to the party.
- B** None of the students couldn't write the report.
- ✓ **C** Twenty years ago, computers did not play an important role in our everyday lives.
- D** Susan didn't have no fun at the picnic.

Spelling

Correct spelling of grade-level words is assessed by multiple-choice items. Spelling is also assessed through application of the Language-in-Use Rubric to extended responses and writing prompts.

For Numbers 14 and 15, choose the word that is spelled correctly and BEST completes the sentence.

14 The army will _____ the city.

- A beseige
- ✓ B besiege
- C beseage
- D beseege

15 The company showed a _____ profit.

- ✓ A substantial
- B substantiel
- C substantiul
- D substantiol

Revise for Clarity

Students must analyze the clarity and logical organization of whole sentences in these multiple-choice items.

For Numbers 16 and 17, choose the sentence that is correct and MOST clearly expressed.

- 16** A Falling asleep in my chair, the cannons of the *1812 Overture* suddenly made me open my eyes.
✓ B Falling asleep in my chair, I suddenly opened my eyes when I heard the cannons of the *1812 Overture*.
C Falling asleep in my chair, my eyes suddenly opened when I heard the cannons of the *1812 Overture*.
D The cannons of the *1812 Overture*, after falling asleep in my chair, suddenly made me open my eyes.
- 17** A The banjo can be more difficult than to play the guitar.
B More difficult than to play the guitar can be playing the banjo.
C To play the banjo can be more difficult than playing the guitar.
✓ D Playing the banjo can be more difficult than playing the guitar.

Make Inferences

The students' ability to draw reasonable conclusions from a passage or to recognize ideas implied by a passage is assessed by both multiple-choice and open-ended items.

Number 18 is based on "Letter to the Editor," found on page 14.

18 From this letter it is possible to conclude that the

- ☒ **A** school board determines the budget
- B** basketball coach often plays favorites
- C** superintendent schedules the athletic events
- D** junior varsity team practices with the varsity team

Number 19 is based on "Our Library," found on page 13.

19 Which of the following conclusions can be drawn from this essay?

- A** Patrons are unable to request books.
- B** The library needs more paid personnel.
- C** Merchants favor taxes for further expansion.
- ☒ **D** The library is hampered by too little space.

Number 20 is based on "Memories," found on page 12.

20 Give TWO examples from the story that demonstrate Steve's strong interest in geology.

- 1) _____

- 2) _____

Exemplars:

- Steve remembers and describes in vivid detail the geology field trip he took with his class to Carlsbad Caverns eight years ago.
- Steve returned to Carlsbad Caverns many times after his high school field trip.
- Steve became a geology teacher.
- other relevant text-based response

Rubric:

- | | |
|-----------------|---------------------------|
| 2 points | versions of two exemplars |
| 1 point | version of one exemplar |
| 0 points | other |

The following extended-response item assesses the student's ability to make inferences. The extended response is also evaluated for Writing Development, using the four-point rubric on page 30, and for Language-in-Use, using the rubric on page 31.

Number 21 is based on "Letter to the Editor," found on page 14.

- 21** Suppose you are the editor responding to this letter and you are convinced that the parent has a legitimate argument. Write your own editorial of TWO or THREE paragraphs in which you explain the importance of keeping money in the budget for a junior varsity basketball program. Explain why each of the three board expenses mentioned by the parent could be an unnecessary expense. **Be sure to include information from "Letter to the Editor" in your response.**

Exemplar:

- I share the concern of some local parents over the possible school board decision to end our junior varsity program. Our teams need all the training they can get for continued participation in interscholastic competition.
School board members can use phone, fax, and e-mail to save the costs of expensive conferences. The salary for the superintendent is sufficient for him to maintain his own car. And, rather than having all teachers attend committee meetings, a few representatives can share important information with their colleagues.
Let's keep the junior varsity team!

Rubric:

- 2 points** response takes a position in favor of the junior varsity program, and using information from the original Letter to the Editor, explains why each of the parent's three examples is an unnecessary expense.
- 1 point** response takes a position in favor of the junior varsity program, and using information from the original Letter to the Editor, explains why one or two of the parent's examples are unnecessary expenses.
- 0 points** other

Also Scored for Writing

Apply 4-point Writing Development Rubric, Grades 6–12

Apply 4-point Language-in-Use Rubric, Grades 6–12

Extended Response Writing Development Rubric

Grades 6–12

Score	Writing
4	<ul style="list-style-type: none"> • stays focused on topic and task • includes many relevant ideas and information • organizes ideas logically • exhibits more than adequate word usage • demonstrates more than adequate writing technique • effectively adjusts language and tone to task and reader
Score	Writing
3	<ul style="list-style-type: none"> • stays mostly focused on topic and task • includes many relevant ideas and information • organizes ideas logically • exhibits adequate word usage • demonstrates adequate writing technique • attempts to adjust language and tone to task and reader
Score	Writing
2	<ul style="list-style-type: none"> • stays somewhat focused on topic and task • includes minimal relevant ideas and information • attempts to organize ideas logically • exhibits minimal word usage • demonstrates minimal writing technique • attempts to adjust language and tone to task and reader
Score	Writing
1	<ul style="list-style-type: none"> • exhibits a less than minimal focus on topic and task • includes few relevant ideas or little information • does not organize ideas logically • exhibits less than minimal word usage • demonstrates less than minimal writing technique • may use language and tone inappropriate to task and reader

Language-in-Use Rubric

Grades 6–12

Score	Writing exhibits a good command of language skills.
4	<ul style="list-style-type: none"> • Words have few or no capitalization errors. • Sentences have few or no punctuation errors. • Words have few or no spelling errors. • Sentences have few or no grammar or word usage errors. • Writing has few or no paragraphing errors. • Writing has few or no run-on sentences or sentence fragments. <p>In a Score Point 4 paper, there are no errors that impair the flow of communication. Errors that appear will generally be of the first-draft variety; they have a minor impact on the overall communication.</p>
Score	Writing exhibits an adequate command of language skills.
3	<ul style="list-style-type: none"> • Most capitalization is correct. • Most punctuation is correct. • Most spelling is correct. • Most grammar and word usage are correct. • Most paragraphing is correct. • Writing may have run-on sentences or sentence fragments. <p>In a Score Point 3 paper, errors are occasional but do not impede the flow of communication; the writer's meaning is not seriously obscured by language-in-use errors.</p>
Score	Writing exhibits a minimal command of language skills.
2	<ul style="list-style-type: none"> • Some capitalization is correct. • Some punctuation is correct. • Some spelling is correct. • Some grammar and word usage are correct. • Paragraphing may have errors or may be missing. • Writing may have run-on sentences or sentence fragments. <p>In a Score Point 2 paper, errors are typically frequent and cause the reader to stop and reread part of the writing. While some aspects of the writing may be more consistently correct than others, the existing errors do impair communication. With a little extra effort on the reader's part, it is still possible to discern most, if not all, of what the writer is trying to communicate.</p>
Score	Writing exhibits a less than adequate command of language skills.
1	<ul style="list-style-type: none"> • Words have many capitalization errors. • Sentences have many punctuation errors. • Words have many spelling errors. • Sentences have many grammar and word usage errors. • Paragraphing may have errors or may be missing. • Writing may have run-on sentences or sentence fragments. <p>In a Score Point 1 paper, errors are serious and numerous; they cause the reader to struggle to discern the writer's meaning. Errors are frequently of a wide variety. There may be sections where it is impossible to ascertain what the writer is attempting to communicate.</p>

Cause and Effect

Students are asked to determine causes of events and/or identify their effects in the passages they read. This ability is assessed by both multiple-choice and open-ended items.

Number 22 is based on "Memories," found on page 12.

22 How did the caverns affect the lives of both Steve and Jill?

- A They are both teaching geology.
- B Both have an unnatural fear of bats.
- ✓ C They both chose careers related to nature.
- D Neither of them has returned to Carlsbad.

Number 23 is based on "Light," found on page 15.

23 According to the passage, what causes us to take a phenomenon such as light for granted?

- A its beauty
- ✓ B its common occurrence
- C the functions it performs
- D the speed at which it travels

Number 24 is based on "Letter to the Editor," found on page 14.

24 Using information from the letter, explain ONE disadvantage of eliminating the junior varsity basketball team.

Exemplars:

- All the other high schools in the area will be inconvenienced.
- The junior varsity players will be upset.
- The players will not have gained enough experience to play on a varsity team.
- other relevant text-based response

Rubric:

- | | |
|-----------------|-------------------------|
| 1 point | version of one exemplar |
| 0 points | other |

Author's Purpose/Main Idea

The ability to determine the main idea of a passage and to recognize an author's purpose, perspective, or point of view is assessed by both multiple-choice and open-ended items. Students may also be asked to identify the theme of a literary passage.

Number 25 is based on "Memories," found on page 12.

25 Which of the following titles BEST tells what this story is about?

- A "National Parks"
- B "White Sands High"
- ✓ C "The Evolution of Careers"
- D "A Discussion about Stalactites"

Number 26 is based on "Our Library," found on page 13.

26 What does the writer MOST LIKELY want the reader to do?

- ✓ A Vote for a bond issue.
- B Make use of the library facilities.
- C Make realistic business decisions.
- D Donate books to the reference section.

Number 27 is based on "Memories," found on page 12.

27 In the middle of the story, when Steve mentions that he's been back to Carlsbad Caverns many times, Jill smiles and responds, "So have I."

What is the MOST LIKELY reason the author included this dialogue for Jill?

Exemplars:

- to show the strong impact of that trip on Jill's career choice
- to foreshadow the surprise ending (Jill works at Carlsbad Caverns)
- to show what Steve and Jill have in common
- other relevant text-based reason

Rubric:

- | | |
|-----------------|-------------------------|
| 1 point | version of one exemplar |
| 0 points | other |

Compare and Contrast

The ability to recognize likenesses and differences is a useful way for students to organize their thoughts about what they have read. This ability is assessed by both multiple-choice and open-ended items.

Number 28 is based on "Memories," found on page 12.

- 28** In what way were Steve's and Jill's memories of their trip to the Carlsbad Caverns different?
- ☐ A Jill did not mind the dark, while Steve was afraid of it.
 - ☒ B Steve remembered the stalactites, while Jill remembered her fear of bats.
 - ☐ C Jill remembered that she liked being far from home, but Steve remembered being homesick.
 - ☐ D Steve's memories led to his becoming a geology teacher, while Jill's led her to become a math teacher.

Numbers 29 and 30 are based on "Light," found on page 15.

- 29** According to the passage, in what way was Newton's theory of light similar to Planck's?
- ☐ A Both theories proved that light does not move through space.
 - ☐ B Both theories proved that light travels in waves.
 - ☐ C Both theories maintained that waves of light reinforce each other.
 - ☒ D Both theories suggest that light is composed of particles.

- 30** According to the passage, how did Max Planck's work differ from Thomas Young's?

Exemplars:

- Young demonstrated the wavelike nature of light, while Planck showed light had both particle and wave aspects.
- other relevant text-based response

Rubric:

- | | |
|-----------------|---|
| 1 point | response includes the light theories of BOTH Planck and Young |
| 0 points | other |

Influence and Persuade

The student's ability to recognize how a writer uses language and information to influence the reader's opinion is assessed by both multiple-choice and open-ended items.

Number 31 is based on "Letter to the Editor," found on page 14.

31 In the letter, the words *luxuries* and *expensive* are used to influence the reader to be

- A in favor of fine equipment
- ✓ B against school board expenses
- C against support of the varsity team
- D in favor of teacher attendance at conferences

Numbers 32 and 33 are based on "Our Library," found on page 13.

32 The writer MOST LIKELY quotes Henry Garfield because she

- A wants Garfield to be re-elected
- B believes Garfield is ambitious
- ✓ C considers Garfield to be a good authority
- D knows Garfield is familiar with Main Street

33 Give TWO points the writer makes to show that the library is essential to the town.

- 1) _____

- 2) _____

Exemplars:

- The library contains taped recollections from the town's older citizens.
- An active library will contribute to the economic welfare of the town.
- Current magazines will help local merchants predict business trends.
- other relevant text-based response

Rubric:

- 2 points** versions of two exemplars
- 1 point** version of one exemplar
- 0 points** other

Distinguish Between Fact and Opinion

A student's ability to determine which statements in a passage are provable facts and which are opinions is assessed by both multiple-choice and open-ended items.

Number 34 is based on "Letter to the Editor," found on page 14.

34 Which of the following is an **OPINION** expressed in this letter?

- A** The school board plans to vote on the budget next week.
- ✓ **B** The school board should support the junior varsity basketball team.
- C** The basketball schedule has already been determined.
- D** There are presently a varsity team and junior varsity team at this school.

Number 35 is based on "Our Library," found on page 13.

35 Which of the following is a **FACT** expressed in this essay?

- A** Our public library must be expanded.
- ✓ **B** Books are sometimes damaged as they wait to be placed on shelves.
- C** Merchants might even consider this tax as part of their advertising budgets.
- D** The question is not "Can we afford to expand our library?"

Number 36 is based on "Letter to the Editor," found on page 14.

- 36** In the chart below, indicate whether each statement is a FACT or an OPINION by circling the correct word. Then explain your choice for each statement.

The team has not had a winning season for the last three years.	Basketball for students is more important than luxuries for the staff.
FACT OPINION	FACT OPINION
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Exemplars:

The team has not had a winning season for the last three years.	Basketball for students is more important than luxuries for the staff.
<u>FACT</u> OPINION	FACT <u>OPINION</u>
<ul style="list-style-type: none"> • This statement tells the actual record. • No one would disagree about the record. • It is a fact that the team had 3 losing seasons. • any other relevant response 	<ul style="list-style-type: none"> • Not everyone would think that basketball is important for students. • any other relevant response

Rubric:

- 2 points** response correctly identifies BOTH the fact and the opinion, with each supported by version of one exemplar
- 1 point** response correctly identifies EITHER the fact or the opinion, and supports it with version of one exemplar
- OR
- response correctly identifies BOTH statements as either fact or opinion, but does NOT provide support for either choice
- 0 points** other

Literal Meaning

The ability to determine the meaning of information that is stated in a written text is assessed by both multiple-choice and open-ended items.

Number 37 is based on "Light," found on page 15.

37 According to the passage, when did Thomas Young demonstrate the wave light theory?

- ✓ **A** after 1900
- B** after Huygens
- C** before Newton
- D** before 1600

Number 38 is based on "Letter to the Editor," found on page 14.

38 What MOST LIKELY prompted the writing of this letter?

- ✓ **A** a proposal by the school board
- B** defeats of the basketball team
- C** injuries to the basketball players
- D** a decision by the school board

Number 39 is based on "Light," found on page 15.

39 Using information from the passage, explain what is meant by Isaac Newton's *corpuscular theory*.

Exemplar:

- This theory maintains that light is composed of tiny particles that travel in straight lines through space.
- other relevant text-based explanation

Rubric:

- | | |
|-----------------|---------------------|
| 1 point | version of exemplar |
| 0 points | other |

Literary Conventions/Story Structure

The student's ability to identify the structural elements of a narrative (e.g., plot, setting, and characters) is assessed by both multiple-choice and open-ended items. Assessed abilities also include identifying common literary genres (e.g., short story, science fiction, biography) and literary devices (e.g., figurative language).

Numbers 40 and 41 are based on "Memories," found on page 12.

40 According to the story, which of the following BEST describes Steve?

- A** athletic
- B** reckless
- C** humorous
- ✓ **D** knowledgeable

41 Which sentence BEST summarizes the story?

- ✓ **A** A young man returns to his former hometown and shares news with an old friend.
- B** A young woman visits a cavern and is frightened by the same terrors she had encountered eight years before.
- C** Two young people meet in a lunchroom and fall in love over bacon and eggs.
- D** Two young people return to New Mexico to become rangers in a national park.

Number 42 is based on "Memories," found on page 12.

42 Read this sentence from the story.

Then a slow, black cloud had issued from the caverns and ascended into the heavens.

In what way does the author's description of the bats add to the story's setting and plot?

Exemplars:

- It helps to create a picture so the reader can visualize the scene.
- It helps to explain why everyone was awed by the bats.
- It helps to explain Jill's fear of the bats.
- It stresses the number of bats and the suddenness of their appearance.
- other relevant text-based response

Rubric:

- | | |
|-----------------|-------------------------|
| 1 point | version of one exemplar |
| 0 points | other |



Mathematics

ESSENTIAL SKILLS

- ☐ Select and apply problem-solving methods in a realistic context (Problem Solving)*
- ☐ Communicate orally and in writing mathematical ideas, as well as their power and usefulness, as they apply to the real world (Communication)*
- ☐ Use inductive and deductive reasoning to solve problems (Reasoning)*
- ☐ Develop an understanding of basic algebraic concepts and skills, and apply those skills requiring algebraic manipulation to solve equations and inequalities (Algebra)
- ☐ Develop an understanding of elementary functions, their graphs, and their applications to the real world (Functions)
- ☐ Develop an understanding of two- and three-dimensional geometric figures as they apply to realistic problems (Geometry)
- ☐ Develop an understanding of descriptive statistics (Statistics)
- ☐ Develop an understanding of probability (Probability)
- ☐ Use computational skills and concepts with appropriate technology and/or paper and pencil to solve simple word problems (Computation)

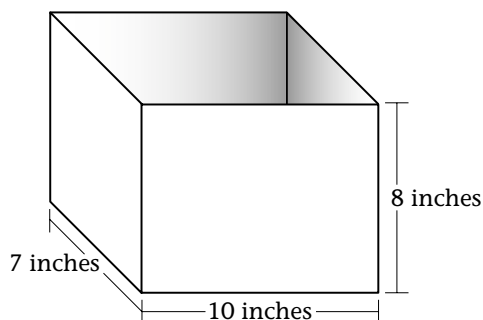
***NOTE:** For *ISTEP+* assessment purposes **only**, the Essential Skills marked with an asterisk have been combined into one category called Problem Solving/Communication/Reasoning.

Sample Test Items

Problem Solving/Communication/Reasoning

This standard assesses a student's ability to develop, apply, and explain a strategy for solving real-world problems.

- 1** Brenda is preparing a bid to paint the 5 inside surfaces of some containers without lids. She has to find the surface areas of the containers to determine how much paint she will need. Each container is 10 inches long, 7 inches wide, and 8 inches tall.



How many square inches of surface will she paint on each container?

$$\text{Area of rectangle} = lw$$

- A 222 square inches
- B 238 square inches
- ✓ C 342 square inches
- D 560 square inches

- 2** Jenna is conducting research for a report she must write about Indiana. She read that the population of Indiana increased by 3.6% from 1993 to 1998. If Jenna wants to use the same growth rate to predict the population of Indiana in the year 2003, what information will she need?

- A the population of Indiana in 1988
- B the average population for the 5 years from 1993 to 1998
- ✓ C the population of Indiana in 1993
- D the actual percentage increase for each of the 5 years from 1993 to 1998

- 3** Rod conducted a survey to find out what kinds of music his classmates liked. His results are shown in the table below.

FAVORITE MUSIC

Type	Number of Students
Country	17
Rock	13
Jazz	12
R & B	9

Explain in words or symbols how to determine the probability that a surveyed student's favorite type of music is country. Be sure to include your answer in the explanation.

Answer _____

Exemplary Response:

- $\frac{17}{51}$ or $\frac{1}{3}$ or 0.33 or 33% or 1 out of 3 or 1:3

OR

- Other valid probability

AND

- Explanation or work equivalent to the following:

Determine the total number of students in the survey.

Divide the number of students that chose country by the total number of students.

OR

- $17 + 13 + 12 + 9 = 51$

$$\frac{17}{51} = \frac{1}{3} = 0.33$$

OR

- Other valid explanation

NOTE: A statement of odds (1:2) is not acceptable.

If the correct probability is not written on the answer line, but is stated in the explanation, credit should be given.

Rubric:

2 points Exemplary response

1 point Correct answer only

OR

Correct complete process; error in computation

0 points Other

Algebra

This standard assesses a student's ability to evaluate a given expression, to write equations and inequalities to solve real-world problems, and to solve equations and inequalities in one variable.

- 4** The cost of a certain operator-assisted telephone call can be calculated for any number of minutes (m) by using the following expression.

$$\$1.26 + \$0.22(m - 1)$$

What is the cost of an operator-assisted telephone call that lasts 5 minutes?

- A \$2.58
- B \$2.36
- C \$2.18
- ✓ D \$2.14

- 5** Alex and his friends drove in one car to the amusement park. They paid \$5.00 for parking and \$25.00 for each ticket to the park. They spent \$80.00 for tickets and parking. Which equation could be used to find the number of people (x) who went to the amusement park?

- A $5.00 + 25.00(x + 1) = 80.00$
- B $(25.00 + 5.00)x = 80.00$
- C $25.00 + 5.00(x - 1) = 80.00$
- ✓ D $5.00 + 25.00x = 80.00$

- 6** Julie has \$25.00 to spend on small prizes for her class party. She plans to buy 8 whistles that cost \$1.59 each and some multi-colored pens that cost \$2.29 each. Which of the following inequalities can be used to determine the maximum number of multi-colored pens (p) Julie can buy?

- A $8(1.59) - 2.29p > 25.00$
- ✓ B $8(1.59) + 2.29p \leq 25.00$
- C $8(1.59) + p \geq 25.00$
- D $1.59 + p < 25.00$

- 7** Stacy spent \$165 on books. She bought one book for \$45 and the rest for \$30 each.

Write an equation to find the number of \$30 books (x) that she bought.
You do NOT have to solve the equation.

Equation _____

Exemplary Response:

- $30x + 45 = 165$

OR

- $30x = 120$

OR

- $x = \frac{120}{30}$

OR

- $x = 4$

OR

- Other valid equation

NOTE: The equation must contain an equal sign.

Other variables may be used.

Rubric:

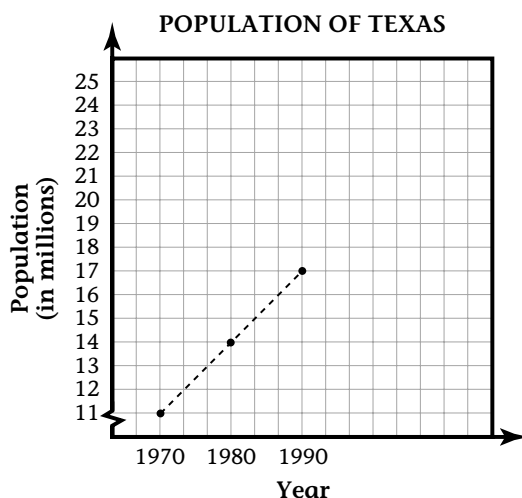
1 point Exemplary response

0 points Other

Functions

This standard assesses a student's ability to make and interpret graphs and tables of real-world functional situations, to convert among various representations of functions, and to predict the result of a given function.

- 8** Felicia created this graph to show the population of Texas for the years 1970, 1980, and 1990.



If the population continues to increase at the same rate, which is the best **ESTIMATE** for the population of Texas in 2010?

- A 17,000,000
- B 20,000,000
- ✓ C 23,000,000
- D 29,000,000

- 9** City Plumbing charges \$45 for the first hour of a service call. The schedule below is used to determine the cost of longer service calls.

FEE SCHEDULE

Time (in hours)	Total Cost (in dollars)
Up to 1 hour	45
1.5	70
2.0	95
2.5	120

If the pattern continues, what will be the cost of a 3.5-hour service call?

- A \$ 87.50
- B \$145.00
- C \$157.50
- ✓ D \$170.00

- 10** Maggie is coasting down a hill on her bicycle. She is conducting an experiment to determine the distance she travels after coasting for different amounts of time. The total distance she traveled was recorded at one-second intervals, as shown in the table below.

COASTING EXPERIMENT DATA

Elapsed Time (in seconds)	Total Distance Traveled (in feet)
1	1
2	4
3	9
4	16
5	25

If the pattern continues, how many seconds will it take Maggie to travel a total distance of 144 feet?

Show your work.

Answer _____ seconds

Exemplary Response:

- 12 seconds

Sample Process:

- The distances traveled are equal to the time it took to travel those distances squared. Thus, the time for 144 feet would be the square root of 144, or 12 seconds.

OR

- Other valid process

Rubric:

- 2 points** Exemplary response
- 1 point** Correct complete process; error in computation
- 0 points** Other

Geometry

This standard assesses a student's ability to draw two-dimensional shapes given definitions and properties, use given transformations to reorient figures, find length, area, and volume of two- and three-dimensional shapes, and use the Pythagorean theorem to solve real-world problems.

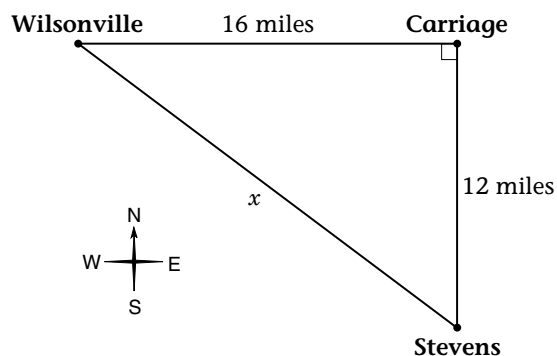
- 11** A cylindrical gasoline storage tank has a radius of 3 meters and a height of 4 meters. What is the volume of the tank?

$$\text{Volume of cylinder} = \pi r^2 h$$

Use $\pi = 3.14$

- A** 28.26 cubic meters
B 37.68 cubic meters
C 75.36 cubic meters
✓ **D** 113.04 cubic meters

- 12** Wilsonville is 16 miles due west of Carriage, and Stevens is 12 miles due south of Carriage.

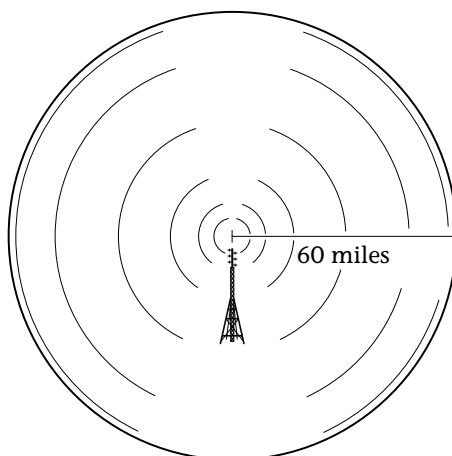


The shortest distance between Wilsonville and Stevens is represented by x in the diagram above. To the nearest mile, what is the distance, x , from Wilsonville to Stevens?

$$\text{Pythagorean theorem: } a^2 + b^2 = c^2$$

- A** 400 miles
B 200 miles
C 28 miles
✓ **D** 20 miles

- 13** An advertising committee plans to air announcements for a triathlon on the local radio station. The radio signal reaches the area shown in the picture below.



Area of circle: $A = \pi r^2$
Use $\pi = 3.14$

What is the area covered, in square miles, by the radio signal?

Show your work.

Answer _____ square miles

Exemplary Response:

- 11,304 square miles

Sample Process:

- Area = $3.14 (60^2)$
= $3.14 (3,600)$
= 11,304

OR

- Other valid process

Rubric:

- | | |
|-----------------|--|
| 2 points | Exemplary response |
| 1 point | Correct complete process; error in computation |
| 0 points | Other |

Statistics

This standard assesses a student's ability to make frequency tables and bar graphs representing real-life data, interpret circle and line graphs, make decisions using statistical data, and determine the mean, median, and mode of a set of data.

- 14** Jamie played in seven basketball games this season. Her rebounds for each game are shown below.

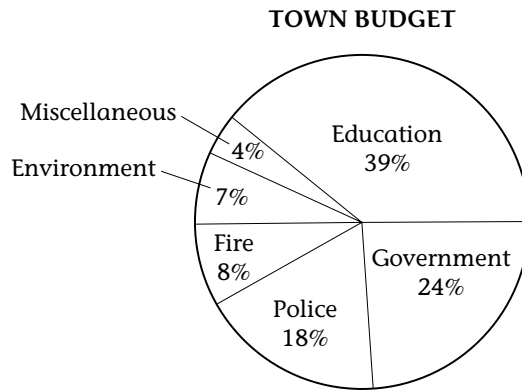
7, 4, 8, 1, 6, 8, 8

What was her MEDIAN number of rebounds in a game?

MEAN is the arithmetic average.
MEDIAN is the middle ordered value.
MODE is the most frequent value.

- ☐ A 8
☒ B 7
☐ C 6
☐ D 1

- 15** The graph below shows the budget for a small town.



If the total budget for the town is \$1,005,000, how much money should be budgeted for the police department?

- ☐ A \$40,200
☐ B \$80,400
☒ C \$180,900
☐ D \$241,200

- 16** An Operations Committee reviews national surveys to make predictions about participants. A survey of students 12 to 17 years old shows the number participating in various athletic activities. The survey results are given below.

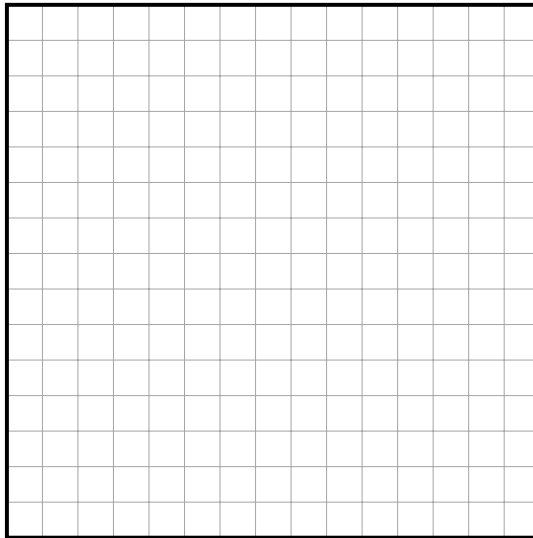
ATHLETIC ACTIVITY SURVEY

Activity	Number of Students 12 to 17 Years Old
Aerobic exercising	750
Bicycling	10,000
Hiking	3,000
Running	3,500
Swimming	11,250

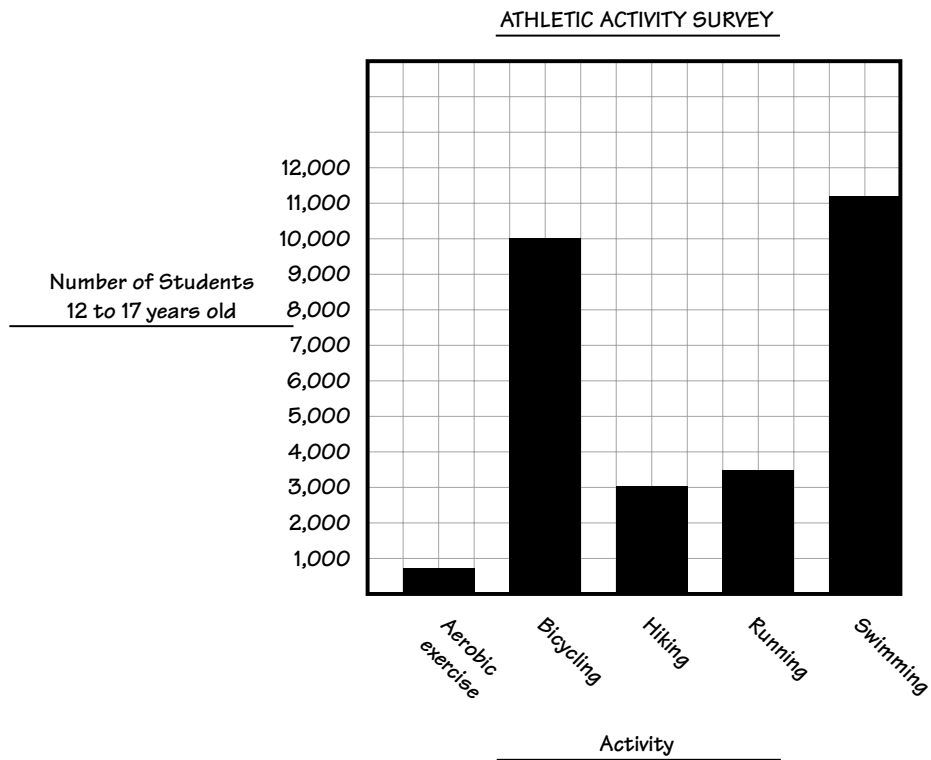
On the grid below, draw a BAR GRAPH that shows the data in the table.

Be sure to

- title the graph
- label the axes
- use appropriate and consistent scales
- graph the data accurately



Exemplary Response:



Rubric:

- Award two points if ALL of the pieces of data are plotted correctly according to student's scale.

OR

- Award one point if ALL BUT ONE of the pieces of data are plotted correctly according to student's scale.

NOTE: Subtract one point if more than one data bar label is missing.

Subtract one point if the bars start at the axis representing the dependent variable.

Subtract one point if a graph other than a bar graph is made.

AND

- Award one point if the numerical scale is consistent from the first non-zero value (no break symbol is necessary) and the scale includes all data provided.

AND

- Award one point if the graph has something for a TITLE, and BOTH the X-AXIS and the Y-AXIS have something for LABELS.

NOTE: There is no penalty for switching the data axes.

Maximum number of Score Points = 4

Probability

This standard assesses a student's ability to apply the counting principle to real-life applications, determine the probability of an outcome in a simple probability experiment, and interpret real-life probability.

17 The Griffins are buying a new car. They are considering royal blue, red, or dark green for the exterior color, and gray, tan, or black for the interior color. If they choose 1 color for the exterior and 1 color for the interior, how many color combinations are possible?

- ☒ **A** 9 combinations
- B** 6 combinations
- C** 3 combinations
- D** 2 combinations

18 Casey has a small bag of assorted jellybeans. The bag contains 4 red, 4 yellow, 6 green, and 4 black jellybeans. If she reaches into the bag without looking and removes 1 jellybean, what is the probability that it will be green?

- A** $\frac{1}{2}$
- ☒ **B** $\frac{1}{3}$
- C** $\frac{1}{6}$
- D** $\frac{1}{18}$

- 19** Stan is shopping for computer hardware. He finds that 3 types of monitors and 4 types of printers are on sale. How many different combinations of 1 printer and 1 monitor could Stan buy if he chooses from the sale items?

Show your work.

Answer _____ combinations

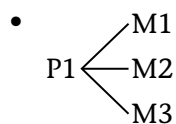
Exemplary Response:

- 12 combinations

Sample Process:

- 4(3)

OR



P2 — (3)

P3 — (3)

P4 — (3)

OR

- Other valid process

Rubric:

2 points Exemplary response

1 point Seven to eleven correct combinations shown

OR

Correct complete process; error in computation

0 points Other

NOTE: If the answer line is blank and all twelve combinations are shown, "12" does not need to appear.

There is no penalty for duplication.

Computation

This standard assesses a student's ability to manually compute and estimate using the four basic mathematical operations, to use ratios, proportions, and percents to solve problems, and to choose and convert between appropriate units of measure.

- 20** Dale hiked 3 different trails on a weekend camping trip. He hiked $1\frac{7}{8}$ miles on the first trail, $2\frac{1}{4}$ miles on the second trail, and $1\frac{1}{2}$ miles on the third trail. How many miles did Dale hike in all?

- A $4\frac{5}{8}$ miles
- B $5\frac{1}{8}$ miles
- C $5\frac{3}{8}$ miles
- ✓ D $5\frac{5}{8}$ miles

- 21** The ratio of workers to supervisors in a certain factory is 45 to 2. If there are 1,125 workers in the factory, how many supervisors are there?

- A 2,250 supervisors
- B 1,080 supervisors
- C 90 supervisors
- ✓ D 50 supervisors

- 22** During one week, Corrie spent \$66.50 on food and \$11.35 on gas. If this is the average amount she spends for these items each week, which is the best ESTIMATE of how much she spends on food and gas for a year (52 weeks)?

- A \$3,500
- ✓ B \$4,000
- C \$4,500
- D \$5,200

- 23** The principal at Stow High School suggested that 2 teachers escort every 5 students on a field trip. There are 25 students planning to go on the field trip. Based on this information, set up and solve a proportion to determine how many teacher escorts will be required.

Proportion _____

Now solve the proportion you wrote. Write your answer on the line below.

Show your work.

Answer _____ teacher escorts

Exemplary Response:

• $\frac{2}{5} = \frac{x}{25}$ or $\frac{5}{2} = \frac{25}{x}$ or $\frac{x}{2} = \frac{25}{5}$ or $\frac{2}{x} = \frac{5}{25}$

OR

- Other equivalent proportion

AND

- 10 teacher escorts

NOTE: The proportion must contain an equal sign.

Other variables may be used.

Rubric:

2 points	Exemplary response
1 point	Correct proportion only
	OR
	Correct answer only
0 points	Other

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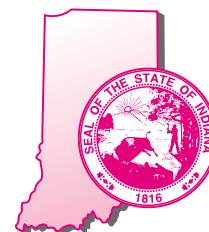
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